

# **Exhibit A**

**PATENT APPLICATION**

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

In re application of

Docket No: Q73020

Emmanual MARILLY, et al.

Appln. No.: 10/307,461

Group Art Unit: 2614

Confirmation No.: 9501

Examiner: Melur RAMAKRISHNAIAH

Filed: December 2, 2002

For: A METHOD OF DETERMINING SERVICE TRENDS

**AMENDMENT UNDER 37 C.F.R. § 1.111**

**MAIL STOP AMENDMENT**

Commissioner for Patents

P.O. Box 1450

Alexandria, VA 22313-1450

Sir:

In response to the Office Action dated February 12, 2007, please amend the above-identified application as follows on the accompanying pages.

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**AMENDMENTS TO THE CLAIMS**

**This listing of claims will replace all prior versions and listings of claims in the application:**

**LISTING OF CLAIMS:**

1. (Currently Amended): A method of determining communications network service trends, the method comprising the steps of:

[[[-]] selecting two or more parameters of a network representative of a network service and variable in time;

[[[-]] measuring and/or calculating at two or more times values of the network parameters;

[[[-]] determining at two or more times the value of a service indicator as a function of said measured and/or calculated parameter values; ~~and~~

[[[-]] determining a trend of the indicator as a function of said determined indicator values, ~~and~~

determining as a function of the trend of the indicator a time of the service indicator crossing a defined threshold.

2. (Cancelled).

3. (Original): The method of claim 1, wherein the network service is selected from the group comprising: voice; videophone; telephone; multimedia; video on demand; private virtual network; real time data; interactive data; and data stream services.

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4. (Original): The method of claim 1, further comprising a step of determining an indicator plane by linear regression of the measured and/or calculated network parameters.

5. (Currently Amended): The method of claim 1, wherein the determining the service trend includes comparing parameter values to predetermined thresholds.

6. (Currently Amended): The method of claim 5, wherein the determining the service trend further comprises:

[[–]]determining a network parameter trend, and

[[–]]comparing the parameter trend to a predetermined threshold.

7. (Original): The method of claim 1, wherein the trend of the indicator is determined by a neural network.

8. (Original): The method of claim 7, further comprising a training step in which the neural network determines rules of association between a service trend and service parameter values.

9. (Original): The method of claim 8, wherein the training step comprises inserting into the neural network a training base providing service trend values associated with service parameter values.

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10. (Original): The method of claim 9, wherein the neural network is a multilayer network.

11. (Original): The method of claim 1, further comprising a step of calculating a mathematical expectation of financial loss as a function of the network service trend determined.

12. (Original): The method of claim 1, further comprising a step of determining a capacity to provide a network service at a given time.

13. (Original): A network and/or service management system using a method according to claim 1.

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## **REMARKS**

Reconsideration and allowance of the subject application are respectfully requested. By this Amendment, Applicant has amended claims 1, 5, and 6, and cancelled claim 2.

Accordingly, upon entry of this Amendment, claims 1 and 3-13 are all the claims pending in the application. In response to the Office Action, Applicant respectfully submits that the claims define patentable subject matter.

### **I. Overview of the Office Action**

Claims 1-3, 5, 6, and 12-13 are rejected under 35 U.S.C. § 102(e) as being anticipated by Clark (WO 01/80492). Claim 4 is rejected under 35 U.S.C. § 103(a) as being unpatentable over Clark in view of Jones et al. (U.S. Patent No. 6,721,750, hereafter “Jones”). Claims 7-10 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Clark in view of Chittipeddi (U.S. Patent No. 6,246,325). Claims 11 is rejected under 35 U.S.C. § 103(a) as being unpatentable over Clark in view of Deville (U.S. Patent No. 5,909,646). By this Amendment, Applicant has cancelled claim 2, therefore rendering moot the rejection of claim 2.

### **II. Preliminary Matters**

#### **A. Foreign Priority**

A certified copy of the Foreign Priority document was filed in the U.S. Patent and Trademark Office on July 31, 2002. However, the Examiner did not properly acknowledge receipt of the Foreign Priority document by checking box 12(a)(1) of the Office Action Summary. Applicant respectfully requests that the Examiner fully acknowledge receipt of the Foreign Priority documents in the next Office Action.

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## **B. Information Disclosure Statement**

Applicant thanks the Examiner for initialing and returning a copy of the form PTO/SB/08 filed on December 2, 2002.

## **III. Prior Art Rejections**

### **Disclosure of Clark**

Clark discloses generally a quality monitoring system for packet based multimedia signal transmission systems. The monitoring system estimates the parameters of a statistical model representing the probabilities of the packet based transmission system being in a low loss state or a high loss state (page 5, lines 18-24), and uses the estimates to predict the subjective quality of the multimedia signal.

### **Analysis**

The Examiner alleges that Clark discloses all of the features of independent claim 1. Applicant respectfully disagrees with the Examiner's position.

Clark teaches a quality of service monitor for a multimedia communications system (FIG. 2) which selects at least two parameters (packet loss and jitter) (page 11, lines 1-13). The parameters are measured at regular and frequent intervals (page 10, lines 29-30 and page 11, lines 1-13). A service indicator (voice quality) is estimated at regular intervals based on the determined parameters (page 11, lines 14-15). The computed voice quality is then transferred to a Thresholding and History Tracking function (page 12, lines 13-15).

There is no teaching or suggestion in Clark of "a subsequent step of determining as a function of the trend of the indicator a time of the service indicator crossing a defined threshold"

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as recited in amended claim 1. The Examiner provides no specific support in the cited reference for this feature of the claim, but merely alleges that this feature along with the features of dependent claims 3, 5, 6, 12 and 13 are taught in the Abstract, page 5, line 25 – page 6, line 23; page 7, line 25 – page 9, line 21; page 10, line 17 – page 14, line 19 and FIGS. 3-7. However, these cited portions (or any other portion) of Clark simply do not disclose “determining as a function of the trend of the indicator a time of the service indicator crossing a defined threshold” as recited in amended claim 1.

Accordingly, Applicant respectfully submits that independent claim 1 should be allowable because the cited references do not teach or suggest all of the features of the claim. Claims 3-13 should also be allowable as least by virtue of their dependency on independent claim 1.

In view of the above, reconsideration and allowance of this application are now believed to be in order, and such actions are hereby solicited. If any points remain in issue which the Examiner feels may be best resolved through a personal or telephone interview, the Examiner is kindly requested to contact the undersigned at the telephone number listed below.

Applicant files concurrently herewith a Petition (with fee) for an Extension of Time of one month, thereby extending the time for response to June 12, 2007. Applicant hereby petitions for any extension of time which may be required to maintain the pendency of this application, and any required fee for such extension is to be charged to Deposit Account No. 19-4880.

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The Commissioner is also authorized to charge any additional fees under 37 C.F.R. § 1.16 and/or § 1.17 necessary to keep this application pending in the Patent and Trademark Office or credit any overpayment to said Deposit Account No. 19-4880.

Respectfully submitted,

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